

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 July 2003 (31.07.2003)

PCT

(10) International Publication Number
WO 03/062462 A3

(51) International Patent Classification⁷: **C12Q 1/68**

(21) International Application Number: PCT/GB03/00156

(22) International Filing Date: 16 January 2003 (16.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0200927.2 16 January 2002 (16.01.2002) GB
0227239.1 21 November 2002 (21.11.2002) GB

(71) Applicant (for all designated States except US): **DYNAL BIOTECH ASA** [NO/NO]; P.O. Box 114, Smestad, N-0309 Oslo (NO).

(71) Applicant (for GB only): **DZIEGLEWSKA, Hanna** [GB/GB]; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BOSNES, Marie** [NO/NO]; Gamle Strømsvei 106a, N-1061 Oslo (NO).

(74) Agent: **FRANK B. DEHN & CO.**; 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

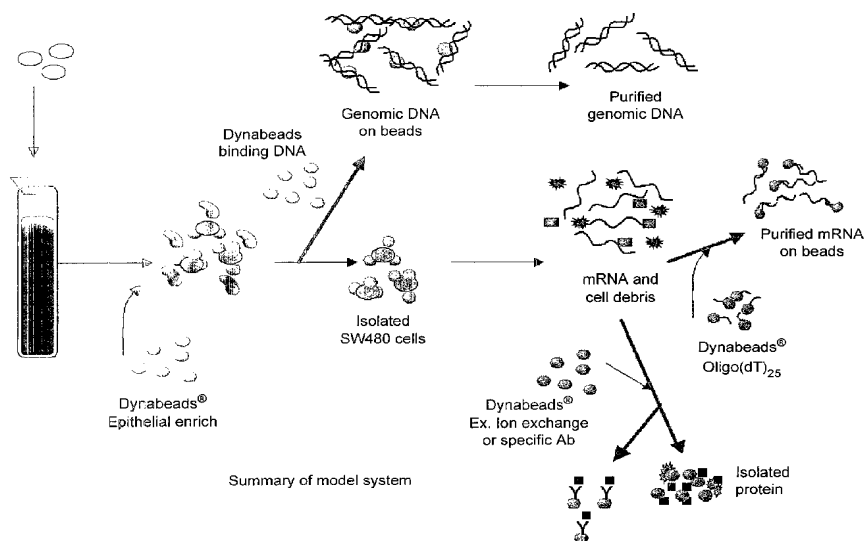
Published:

— with international search report

(88) Date of publication of the international search report:
11 December 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR ISOLATING NUCLEIC ACIDS AND PROTEIN FROM A SINGLE SAMPLE



(57) Abstract: The present invention comprises a method of isolating nucleic acid and protein from the same sample with solid supports, wherein nucleic acid and protein components contained in the sample become bound to distinct solid supports. The invention also allows for kits for isolating nucleic acid and protein from the same sample and for use of the method of isolating nucleic acid and protein for the analysis and/or comparison of mRNA and/or protein expression and/or their correlation to genomic information.



WO 03/062462 A3

INTERNATIONAL SEARCH REPORT

PCT/GB 03/00156

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00 61806 A (KUNITAKE STEVEN T ;LOSSING ANN BENNETT (US); BAER THOMAS M (US); A) 19 October 2000 (2000-10-19) abstract page 2, line 8 - line 14 page 3, line 1 -page 4, line 12 page 17, line 23 - line 29 --- -/--	1-29



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

8 September 2003

Date of mailing of the international search report

17/09/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Tilkorn, A-C

INTERNATIONAL SEARCH REPORT

PCT/GB 03/00156

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>BÜSSOW ET AL: "A METHOD FOR GLOBAL PROTEIN EXPRESSION AND ANTIBODY SCREENING ON HIGH-DENSITY FILTERS OF AN ARRAYED cDNA LIBRARY"</p> <p>NUCLEIC ACIDS RESEARCH, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 26, no. 21, November 1998 (1998-11), pages 5007-5008, XP002114084 ISSN: 0305-1048 abstract page 5007, column 1, paragraph 3 -column 2, paragraph 1 page 5008, column 1, paragraph 3 -column 2, paragraph 1; figure 1 ----</p>	1,7-10, 14,15, 26-28
X	<p>DE 42 37 381 C (DIAGEN INST MOLEKULARBIO) 28 April 1994 (1994-04-28) abstract column 1, line 43 -column 3, line 38 ----</p>	26-28
A	<p>EP 0 885 958 A (PRECISION SYST SCIENCE CO LTD) 23 December 1998 (1998-12-23) the whole document ----</p>	1-29
A	<p>WO 00 29848 A (CHAMPAGNE JAMES T ;PROTEO TOOLS (US)) 25 May 2000 (2000-05-25) the whole document ----</p>	1-29
A	<p>WO 00 42432 A (LABSYSTEMS OY ;PALOMAEMI PEKKA (FI); TUUNANEN JUKKA (FI); KAERMENI) 20 July 2000 (2000-07-20) the whole document -----</p>	1-29

INTERNATIONAL SEARCH REPORT

PCT/GB 03/00156

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0061806	A	19-10-2000	AU 4058100 A EP 1183387 A2 WO 0061806 A2	14-11-2000 06-03-2002 19-10-2000
DE 4237381	C	28-04-1994	DE 4237381 C1 AT 151175 T DE 59306062 D1 WO 9410572 A1 EP 0667960 A1 JP 8505222 T US 5849545 A	28-04-1994 15-04-1997 07-05-1997 11-05-1994 23-08-1995 04-06-1996 15-12-1998
EP 0885958	A	23-12-1998	AU 1811197 A EP 0885958 A1 US 6100079 A WO 9731105 A1	10-09-1997 23-12-1998 08-08-2000 28-08-1997
WO 0029848	A	25-05-2000	AU 2025400 A WO 0029848 A1	05-06-2000 25-05-2000
WO 0042432	A	20-07-2000	EP 1145010 A1 WO 0042432 A1 JP 2002535620 T NO 20013541 A	17-10-2001 20-07-2000 22-10-2002 17-09-2001